

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P313597

Luminaire Tested: **24FCZ2-45-UNV-L83050-RDP-CA125-W2A-U-4000K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P313597
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-45-UNV-L83050-RDP-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (168) 4000K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2916.0 lumens
Efficiency: N/A
Efficacy: 75.7 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

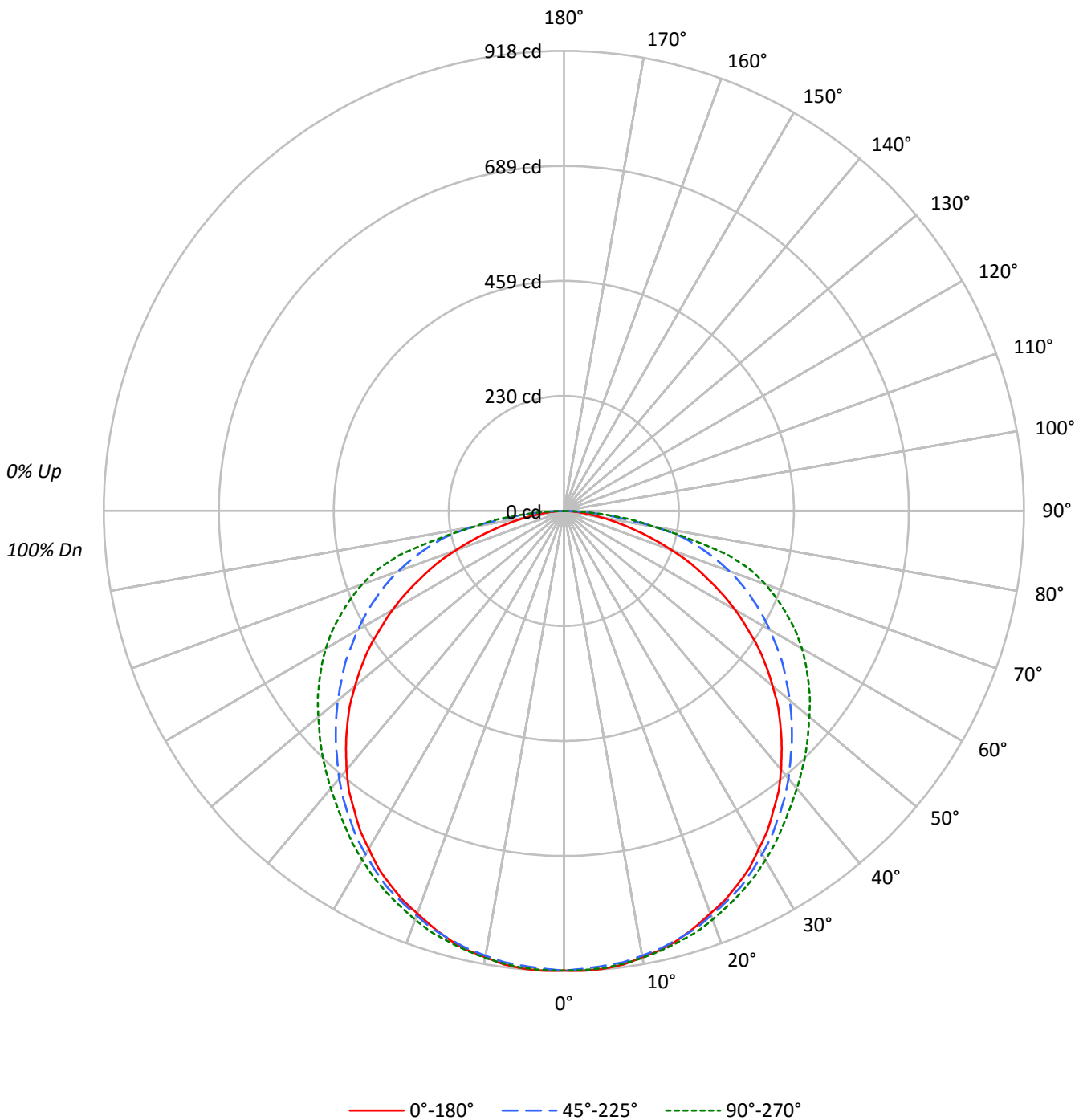
Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1234	1234	1234
5°	1239	1231	1237
10°	1235	1231	1237
15°	1233	1231	1239
20°	1224	1230	1243
25°	1220	1233	1245
30°	1209	1229	1249
35°	1197	1226	1254
40°	1184	1225	1270
45°	1164	1225	1299
50°	1138	1232	1338
55°	1110	1252	1398
60°	1063	1277	1475
65°	995	1322	1566
70°	905	1383	1684
75°	767	1459	1760
80°	605	1468	1423
85°	446	1116	1250



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.0	3.0
10°-20°	250.3	8.6
20°-30°	382.8	13.1
30°-40°	468.0	16.0
40°-50°	498.8	17.1
50°-60°	476.9	16.4
60°-70°	404.0	13.9
70°-80°	271.5	9.3
80°-90°	76.6	2.6
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	720.2	24.7
0°-40°	1188.2	40.7
0°-60°	2163.9	74.2
0°-90°	2916.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2916.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	917	917	917	917	917	
5°	917	916	911	916	916	87
15°	885	885	884	891	890	250
25°	822	824	830	837	839	379
35°	729	735	746	761	764	457
45°	612	622	644	671	683	472
55°	473	490	534	576	596	421
65°	312	344	415	470	492	310
75°	148	201	281	328	338	158
85°	29	59	72	78	81	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	917.0	917.0	917.0	917.0	917.0
2.5°	918.4	918.4	914.1	917.0	917.0
5°	917.0	915.6	911.2	915.6	915.6
7.5°	912.7	911.2	908.3	912.7	911.2
10°	904.0	904.0	901.1	905.4	905.4
12.5°	896.7	895.3	893.9	899.6	898.2
15°	885.2	885.2	883.7	891.0	889.5
17.5°	870.7	872.2	873.6	879.4	880.8
20°	854.8	857.7	859.1	867.8	867.8
22.5°	840.3	841.8	844.7	853.4	853.4
25°	821.5	824.4	830.2	837.4	838.9
27.5°	802.7	804.2	811.4	821.5	823.0
30°	778.1	782.5	791.2	802.7	804.2
32.5°	756.5	760.8	770.9	782.5	785.4
35°	729.0	734.8	746.3	760.8	763.7
37.5°	704.4	708.7	723.2	739.1	743.4
40°	674.0	682.7	697.2	716.0	723.2
42.5°	643.6	652.3	669.7	694.3	702.9
45°	611.8	621.9	643.6	671.1	682.7
47.5°	580.0	591.6	616.2	648.0	661.0
50°	543.8	558.3	588.7	624.8	639.3
52.5°	509.1	526.5	559.7	600.2	619.0
55°	473.0	490.3	533.7	575.7	595.9
57.5°	432.5	455.6	503.3	551.1	572.8
60°	394.9	416.6	474.4	526.5	548.2
62.5°	354.4	383.3	445.5	500.4	522.1
65°	312.4	344.2	415.1	470.1	491.8
67.5°	274.8	309.5	384.7	439.7	461.4
70°	230.0	273.4	351.5	406.4	428.1
72.5°	188.0	235.8	316.8	370.3	390.5
75°	147.5	201.0	280.6	328.3	338.5
77.5°	109.9	166.3	243.0	263.2	256.0
80°	78.1	133.1	189.5	179.3	183.7
82.5°	50.6	101.2	117.2	133.1	137.4
85°	28.9	59.3	72.3	78.1	81.0
87.5°	13.0	21.7	28.9	28.9	27.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)